Claims

I claim:

1. A Collection Adaptive Focus GUI process for adapting a graphical user interface to a new work situation, comprising the following steps:

   (a) receiving a work situation change event, and

   (b) performing an adaptive response to said work situation change event,

   thereby providing a solution to the Adaptive Focus GUI Problem, and

   thereby providing graphical user interfaces with a practical means for adapting themselves to changes in user focus and work situations, in a way that was not previously available.

2. The process of claim 1, wherein

   (a) said step of receiving a work situation change event receives an event selected from the group consisting of initial invocation change events and full work situation change events and partial work situation change events and partial work situation context change events and partial work situation base directory change events and partial work situation collection change events and partial work situation role change events and partial work situation timeset change events and partial work situation focus variable change events and partial work situation focus variable group change events,

   thereby helping to solve the Adaptive Focus GUI Problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby providing graphical user interfaces with a practical means for responding to work situation change events that represent the practical concepts of why, where, what, who, when, and how.

3. The process of claim 1, wherein

(a) said step of receiving a work situation change event receives a work situation change event from a source selected from the group consisting of human operators and external programs and a GUI program that is executing said step of receiving a work situation change event,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and

thereby providing GUI interfaces with a practical means for responding to work situation change events that originate from both inside and outside the GUI program.

4. The process of claim 1, wherein

(a) said step of performing an adaptive response obtains a work situation name from said work situation change event,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and

thereby providing a practical means for clearly identifying a particular work situation to be installed as part of said adaptive response.

5. The process of claim 1, wherein

(a) said step of performing an adaptive response uses a work situation name, and work situation data read from an adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying a particular work situation definition to be installed as part of said adaptive response.

6. The process of claim 1, wherein

(a) said step of performing an adaptive response uses a work situation name, and work situation data read from a context-sensitive adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying in a context-sensitive way a particular work situation definition to be installed as part of said adaptive response.

7. The process of claim 1, wherein

(a) said step of performing an adaptive response uses adaptive data read from an adaptive data storage means to perform said adaptive response,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for obtaining adaptive data to be used in the performance of said adaptive response.

8. The process of claim 1, wherein

(a) said step of performing an adaptive response uses adaptive data read from a context-sensitive adaptive data storage means to perform said adaptive response,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way adaptive data to be used in the performance of said adaptive response.

9. The process of claim 1, wherein

(a) said step of performing an adaptive response performs zero or more focus-gain or focus-loss actions,

thereby solving the Work Situation Focus Actions Problem, and

thereby providing a practical means for performing useful focus-gain and focus-loss actions as the GUI changes from an old work situation to said new work situation.

10. The process of claim 1, wherein

(a) said step of performing an adaptive response uses adaptation information from definitions selected from the group consisting of context definitions and base directory definitions and collection type definitions and role definitions and timeset definitions and focus variable definitions and focus variable group definitions and GUI layout definitions and menu choice definitions,

thereby providing a practical means for utilizing stored adaptation knowledge to help solve the Collection Adaptive Focus GUI Problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby providing a practical means for utilizing scalable, extensible, customized, and user-provided adaptation knowledge to adapt a graphical user interface to specific user-oriented work situations in ways that were not previously available.

11. The process of claim 1, wherein

(a) said step of performing an adaptive response expands an incoming partial work situation change event into a full work situation,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby providing users with a practical means for defining custom partial work

situation expansion policies, and

thereby enabling users to focus on a new full work situation by providing only a convenient, partial work situation change event.

12. The process of claim 1, wherein

(a) said step of performing an adaptive response expands a partial work situation change event into a full work situation using an expansion method selected from the group consisting of specific value expansion methods and normal value expansion methods and derived value expansion methods,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby providing users with several practical methods for expanding partial situation change events into full situations in accordance with desired user policy preferences.

13. The process of claim 1, wherein

(a) said step of performing an adaptive response overrides one or more full work situation values using work situation value specifiers contained within collection specifier instances,

thereby solving the Work Object Instance Adaptation Problem, and

thereby providing users with a practical means for associating particular work situation values with particular collection instances, and

thereby enabling users to conveniently override default work situation values that are defined by global site policies.

14. The process of claim 1, wherein

(a) said step of performing an adaptive response modifies internal GUI data values selected from the group consisting of context values and base directory values and collection values and role values and timeset values and focus variable values and focus variable group values,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, and

thereby providing a practical means for making work situation knowledge that is relevant to said new work situation available for use by internal GUI functions and externally-spawned command lines.

15. The process of claim 1, wherein

(a) said step of performing an adaptive response modifies one or more visible GUI layout components selected from the group consisting of menu bars and menus and menu choices and toolbars and status bars and text labels and list boxes and radio buttons and drop down boxes and GUI layout components,

thereby helping to solve the Adaptive Focus GUI problem by updating visible GUI displays and controls in accordance with said new work situation, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method

Adaptation Problem, and

thereby providing users with one or more visual indications of a GUI focus change from a previous work situation to said new work situation, and

thereby providing users with a new set of work operations that are relevant to said new work situation.

16. The process of claim 1, wherein

(a) said step of performing an adaptive response communicates adaptation results to one or more destinations selected from the group consisting of computer memories and computer display screens and computer files and computer networks,

thereby helping to solve the Collection Adaptive Focus GUI Problem,

and thereby providing a practical means for displaying and storing adaptation results as part of said adaptive response.

17. A programmable Collection Adaptive Focus GUI device for adapting a graphical user interface to a new work situation, whose actions are directed by software executing a process comprising the following steps:

(a) receiving a work situation change event, and

(b) performing an adaptive response to said work situation change event,

thereby providing a solution to the Adaptive Focus GUI Problem, and

thereby enabling graphical user interfaces to adapt themselves to changes in

user focus and work situations in a scalable way that was not previously available.

18. The programmable device of claim 17, wherein

(a) said step of receiving a work situation change event receives an event selected from the group consisting of initial invocation change events and full work situation change events and partial work situation change events and partial work situation context change events and partial work situation base directory change events and partial work situation collection change events and partial work situation role change events and partial work situation time change events and partial work situation focus variable change events and partial work situation focus variable group change events,

thereby helping to solve the Adaptive Focus GUI Problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby enabling graphical user interfaces to respond to events corresponding to work situation change concepts of why, where, what, who, when, and how.

19. The programmable device of claim 17, wherein

(a) said step of receiving a work situation change event receives a work situation change event from a source selected from the group consisting of human operators and external programs and a GUI program that is executing said step of receiving a work situation change event,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and

thereby providing GUI interfaces with a practical means for responding to work situation change events that originate from both inside and outside the GUI program.

20. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response obtains a work situation name from said work situation change event,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and

thereby providing a practical means for clearly identifying a particular work situation to be installed as part of said adaptive response.

21. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response uses a work situation name, and work situation data read from an adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying a particular work situation definition to be installed as part of said adaptive response.

22. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response uses a work situation name, and work situation data read from a context-sensitive adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying in a context-sensitive way a particular work situation definition to be installed as part of said adaptive response.

23. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response uses adaptive data read from an adaptive data storage means to perform said adaptive response,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for obtaining adaptive data to be used in the performance of said adaptive response.

24. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response uses adaptive data read from a context-sensitive adaptive data storage means to perform said adaptive

response,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way adaptive data to be used in the performance of said adaptive response.

25. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response performs one or more focus-gain or focus-loss actions,

thereby solving the Work Situation Focus Actions Problem, and

thereby providing a practical means for performing useful focus-gain and focus-loss actions as the GUI changes from an old work situation to said new work situation.

26. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response uses information from definitions selected from the group consisting of context definitions and base directory definitions and collection type definitions and role definitions and timeset definitions and focus variable definitions and focus variable group definitions and GUI layout definitions and menu choice definitions,

thereby providing a practical means for using stored adaptation knowledge to help solve the Collection Adaptive Focus GUI Problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby providing a practical means for utilizing scalable, extensible, customized, and user-provided adaptation knowledge to adapt a graphical user interface to specific user-oriented work situations in ways that were not previously possible.

27. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response expands a partial work situation change event into a full work situation,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby providing users with a practical means for defining custom partial work situation expansion policies, and

thereby enabling users to focus on a new full work situation by providing only a partial work situation change event.

28. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response expands a partial work situation change event into a full work situation using an expansion method selected from the group consisting of specific value expansion methods and normal value expansion methods and derived value expansion methods,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby providing users with several practical methods for expanding partial situation change events into full situations in accordance with desired user policy preferences.

29. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response modifies internal GUI data values selected from the group consisting of context values and base directory values and collection values and role values and timeset values and focus variable values and focus variable group values,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby providing a practical means for making work situation knowledge that is relevant to said new work situation available for use by internal GUI functions and external spawned command lines.

30. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response overrides one or more full work situation values using work situation value specifiers contained within collection specifier instances,

thereby solving the Work Object Instance Adaptation Problem, and

thereby providing users with a practical means for associating particular work

situation values with particular collection instances, and

thereby enabling users to conveniently override default work situation values that are defined by global site policies.

31. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response modifies one or more GUI layout components selected from the group consisting of menu bars and menus and menu choices and toolbars and status bars and text labels and list boxes and radio buttons and drop down boxes and GUI layout components affected by focus variables and focus variable groups,

thereby helping to solve the Adaptive Focus GUI problem by updating visible GUI displays and controls in accordance with said new work situation, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, and

thereby providing users with one or more visual indications of the focus change from a previous work situation to a new work situation, and

thereby providing users with a new set of work operations that are relevant to said new work situation.

32. The programmable device of claim 17, wherein

(a) said step of performing an adaptive response communicates adaptation results to one or more destinations selected from the group consisting of

computer memories and computer display screens and computer files and computer networks,

thereby helping to solve the Collection Adaptive Focus GUI Problem,

and thereby providing a practical means for displaying and storing adaptation results as part of said adaptive response.

33. A computer readable memory, encoded with data representing a Collection Adaptive Focus GUI program that can be used to direct a computer when used by the computer, comprising:

(a) means for receiving a work situation change event, and

(b) means for performing an adaptive response to said work situation change event,

thereby providing a solution to the Adaptive Focus GUI Problem, and

thereby enabling graphical user interfaces to adapt themselves to changes in user focus and work situations in a scalable way that was not previously available.

34. The computer readable memory of claim 33, wherein

(a) said means for receiving a work situation change event receives an event selected from the group consisting of initial invocation change events and full work situation change events and partial work situation change events and partial work situation context change events and partial work situation base directory change events and partial work situation collection change events and partial work situation role change events and partial work situation time change events

and partial work situation focus variable change events and partial work situation focus variable group change events,

thereby helping to solve the Adaptive Focus GUI Problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby enabling graphical user interfaces to respond to events corresponding to work situation change concepts of why, where, what, who, when, and how.

35. The computer readable memory of claim 33, wherein

(a) said means for receiving a work situation change event receives a work situation change event from a source selected from the group consisting of human operators and external programs and a GUI program that is executing said means for receiving a work situation change event,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and

thereby providing GUI interfaces with a practical means for responding to work situation change events that originate from both inside and outside the GUI program.

36. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response obtains a work situation name from said work situation change event,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and

thereby providing a practical means for clearly identifying a particular work situation to be installed as part of said adaptive response.

37. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response uses a work situation name, and work situation data read from an adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying a particular work situation definition to be installed as part of said adaptive response.

38. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response uses a work situation name, and work situation data read from a context-sensitive adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying in a context-sensitive way

thereby helping to solve the Collection Adaptive Focus GUI Problem, and

thereby providing a practical means for clearly identifying a particular work situation to be installed as part of said adaptive response.

37. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response uses a work situation name, and work situation data read from an adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying a particular work situation definition to be installed as part of said adaptive response.

38. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response uses a work situation name, and work situation data read from a context-sensitive adaptive data storage means, to perform a name matching operation to identify a work situation definition to be installed,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for identifying in a context-sensitive way

a particular work situation definition to be installed as part of said adaptive response.

39. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response uses adaptive data read from an adaptive data storage means to perform said adaptive response,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for obtaining adaptive data to be used in the performance of said adaptive response.

40. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response uses adaptive data read from a context-sensitive adaptive data storage means to perform said adaptive response,

thereby helping to solve the Collection Adaptive Focus GUI Problem, and the Customized Adaptation Data Problem, and the Sharable Adaptation Data Problem, and the Scalable Adaptation Data Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way adaptive data to be used in the performance of said adaptive response.

41. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response performs one or more focus-gain or focus-loss actions,

thereby solving the Work Situation Focus Actions Problem, and

thereby providing a practical means for performing useful focus-gain and focus-loss actions as the GUI changes from an old work situation to said new work situation.

42. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response uses information from definitions selected from the group consisting of context definitions and base directory definitions and collection type definitions and role definitions and timeset definitions and focus variable definitions and focus variable group definitions and GUI layout definitions and menu choice definitions,

thereby providing a practical means for using stored adaptation knowledge to help solve the Collection Adaptive Focus GUI Problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby providing a practical means for utilizing scalable, extensible, customized, and user-provided adaptation knowledge to adapt a graphical user interface to specific user-oriented work situations in ways that were not previously possible.

43. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response expands a partial work situation change event into a full work situation,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby providing users with a practical means for defining custom partial work situation expansion policies, and

thereby enabling users to focus on a new full work situation by providing only a partial work situation change event.

44. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response expands a partial work situation change event into a full work situation using an expansion method selected from the group consisting of specific value expansion methods and normal value expansion methods and derived value expansion methods,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby providing users with several practical methods for expanding partial situation change events into full situations in accordance with desired user policy preferences.

45. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response overrides one or more full work situation values using work situation value specifiers contained within collection specifier instances,

thereby solving the Work Object Instance Adaptation Problem, and

thereby providing users with a practical means for associating particular work situation values with particular collection instances, and

thereby enabling users to conveniently override default work situation values that are defined by global site policies.

46. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response modifies internal GUI data values selected from the group consisting of context values and base directory values and collection values and role values and timeset values and focus variable values and focus variable group values,

thereby helping to solve the Adaptive Focus GUI problem, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Type Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, the Work Object Instance Adaptation Problem, and

thereby providing a practical means for making work situation knowledge that is relevant to said new work situation available for use by internal GUI functions and external spawned command lines.

47. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response modifies one or more GUI layout components selected from the group consisting of menu bars and menus

and menu choices and toolbars and status bars and text labels and list boxes and radio buttons and drop down boxes and GUI layout components affected by focus variables and focus variable groups,

thereby helping to solve the Adaptive Focus GUI problem by updating visible GUI displays and controls in accordance with said new work situation, and

thereby helping to solve the Work Purpose Adaptation Problem, the Work Location Adaptation Problem, the Work Object Adaptation Problem, the Work Role Adaptation Problem, the Work Time Adaptation Problem, the Work Method Adaptation Problem, and

thereby providing users with one or more visual indications of the focus change from a previous work situation to a new work situation, and

thereby providing users with a new set of work operations that are relevant to said new work situation.

48. The computer readable memory of claim 33, wherein

(a) said means for performing an adaptive response communicates adaptation results to one or more destinations selected from the group consisting of computer memories and computer display screens and computer files and computer networks,

thereby helping to solve the Collection Adaptive Focus GUI Problem,

and thereby providing a practical means for displaying and storing adaptation results as part of said adaptive response.